

PATENT

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicants : Randhir P.S. Thakur,  
Garry A. Mercaldi,  
Michael Nuttall, Shenlin Chen  
and Er-Xuan Ping

Attorney Docket No.: 500996.02 (30014/US/2)

Filed : Concurrently herewith

Title : METHODS FOR ENHANCING CAPACITORS HAVING ROUGHENED FEATURES  
TO INCREASE CHARGE-STORAGE CAPACITY

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**INFORMATION DISCLOSURE STATEMENT**

Mail Stop Patent Application  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

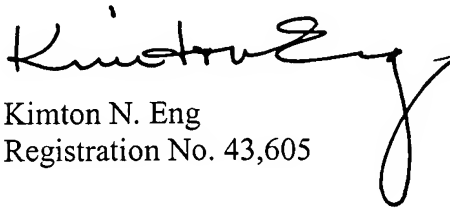
In accordance with 37 C.F.R. §§ 1.56 and 1.97 through 1.98, applicants wish to make known to the Patent and Trademark Office the references set forth on the attached form PTO-1449. This application relies, under 35 U.S.C. § 120, on the earlier filing date of prior Application No. 09/965,240, filed September 26, 2001, which is a continuation-in-part of Application No. 09/692,897, filed October 19, 2000, issued January 27, 2004 as Patent No. 6,682,970, which is a divisional of Application No. 09/260,995, filed March 1, 1999, issued May 1, 2001 as Patent No. 6,225,157, which is a divisional of Application No. 09/032,182, filed February 27, 1998, issued November 21, 2000 as Patent No. 6,150,706. References AA-CL, CN and CP listed on the attached Form PTO-1449 were submitted to and/or cited by the Patent and Trademark Office in these prior applications and, therefore, are not required to be provided in this application. If the Examiner wishes, copies will be provided upon request. Applicants also wish to make known to the Patent and Trademark Office references CM, CO, CQ and CR (copies of these cited references, as required under 37 C.F.R. § 1.98, are enclosed). Although the aforesaid references are made known to the Patent and Trademark Office in compliance with applicants' duty

to disclose all information they are aware of which is believed relevant to the examination of the above-identified application, applicants believe that their invention is patentable.

Please acknowledge receipt of this Information Disclosure Statement and kindly make the cited references of record in the above-identified application.

Respectfully submitted,

DORSEY & WHITNEY LLP

A handwritten signature in black ink, appearing to read 'Kimton N. Eng', with a long, sweeping tail that loops around the text below.

Kimton N. Eng  
Registration No. 43,605

KNE:ajs

Enclosures:

Form PTO-1449

Cited References (4)

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FORM PTO-1449 (REV. 7-80)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. 500996.02 (30014/US/2)	APPLICATION NO. Not Yet Assigned
<b>INFORMATION DISCLOSURE STATEMENT</b> <i>(Use several sheets if necessary)</i>		APPLICANT(S) Randhir P.S. Thakur et al.	
		FILING DATE Concurrently herewith	GROUP ART UNIT Not Yet Assigned

### U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AA	4,211,941	07/08/80	Schade, Jr.	307	303	
	AB	4,419,743	12/06/83	Taguchi et al.	365	149	
	AC	4,551,906	11/12/85	Ogura et al.	29	571	
	AD	4,748,490	05/31/88	Hollingsworth	357	51	
	AE	4,782,032	11/01/88	Geissberger et al.	437	41	
	AF	5,070,384	12/03/91	McCollum et al.	257	530	
	AG	5,227,323	07/13/93	Nishitsuji et al.	437	47	
	AH	5,229,323	07/20/93	Shimada et al.	437	176	
	AI	5,362,632	11/08/94	Mathews	437	47	
	AJ	5,486,488	01/23/96	Kamiyama	437	60	
	AK	5,521,440	05/28/96	Iranmanesh	257	774	
	AL	5,561,307	10/01/96	Mihara et al.	257	295	
	AM	5,567,647	10/22/96	Takahashi	437	177	
	AN	5,587,613	12/24/96	Iranmanesh	257	530	
	AO	5,597,754	01/28/97	Lou et al.	437	52	
	AP	5,608,249	03/04/97	Gonzalez	257	306	
	AQ	5,622,893	04/22/97	Summerfelt et al.	438	396	
	AR	5,627,395	05/06/97	Witek et al.	257	350	
	AS	5,639,684	06/17/97	Kwok	437	60	
	AT	5,652,165	07/29/97	Lu et al.	437	52	
	AU	5,699,291	12/16/97	Tsunemine	365	149	
	AV	5,728,616	03/17/98	Sakao	438	240	
	AW	5,770,500	06/23/98	Batra et al.	438	255	
	AX	5,786,259	07/28/98	Kang	438	396	

EXAMINER

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\* EXAMINER: Initial if reference considered, whether or not criteria is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant(s).

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				FILING DATE <b>Concurrently herewith</b>		GROUP ART UNIT <b>Not Yet Assigned</b>	

*EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AY	5,801,098	09/01/98	Fiordalice et al.	438	653
	AZ	5,804,479	09/08/98	Aoki et al.	438	253
	BA	5,814,852	09/29/98	Sandhu et al.	257	310
	BB	5,827,766	10/27/98	Lou	438	253
	BC	5,837,593	11/17/98	Park et al.	438	396
	BD	5,847,424	12/08/98	Kang	257	306
	BE	5,854,734	12/29/98	Sandhu et al.	361	321.5
	BF	5,866,938	02/02/99	Takagi et al.	257	530
	BG	5,877,062	03/02/99	Horii	438	396
	BH	5,877,978	03/02/99	Morishita et al.	365	149
	BI	5,903,023	05/11/99	Hoshi	257	300
	BJ	5,903,053	05/11/99	Iijima et al.	257	751
	BK	5,905,283	05/18/99	Kasai	257	334
	BL	5,909,043	06/01/99	Summerfelt	257	298
	BM	5,930,106	07/27/99	Deboer et al.	361	305
	BN	5,969,983	10/19/99	Thakur et al.	365	149
	BO	5,970,309	10/19/99	Ha et al.	438	3
	BP	5,976,928	11/02/99	Kirlin et al.	438	240
	BQ	5,977,583	11/02/99	Hosotani et al.	257	311
	BR	5,994,183	11/30/99	Huang et al.	438	256
	BS	5,998,826	12//7/99	Hung et al.	257	315
	BT	6,010,931	01/04/00	Sun et al.	438	240
	BU	6,010,940	01/04/00	Lee et al.	438	396
	BV	6,015,743	01/18/00	Zahurak et al.	438	398
	BW	6,096,630	08/01/00	Byun et al.	438	592
	BX	6,100,193	08/08/00	Suehiro et al.	438	685

EXAMINER	DATE CONSIDERED
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*EXAMINER INITIAL	BY	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	BY	6,114,200	09/05/00	Yew et al.	438	253	
	BZ	6,130,482	10/10/00	Iio et al.	257	774	
	CA	6,140,173	10/31/00	Wolters et al.	438	240	
	CB	6,150,208	11/21/00	Deboer et al.	438	240	
	CC	6,150,705	11/21/00	Chen	257	530	
	CD	6,150,706	11/21/00	Thakur et al.	257	532	
	CE	6,162,741	12/19/00	Akasaka et al.	438	773	
	CF	6,171,925 B1	01/09/01	Graettinger et al.	438	396	
	CG	6,204,069 B1	03/20/01	Summerfelt et al.	438	3	
	CH	6,207,222 B1	03/27/01	Chen et al.	427	97	
	CI	6,225,157 B1	05/01/01	Thakur et al.	438	240	
	CJ	6,251,720	06/26/01	Thakur et al.	438	240	
	CK	6,291,868	09/18/01	Weimer et al.	257	413	
	CL	6,344,413 B1	02/05/02	Zurcher et al.	438	678	
	CM	6,392,284 B1	05/21/02	Thakur et al.	257	530	
	CN	6,458,645 B2	10/01/02	DeBoer et al.	438	240	
	CO	6,479,854 B1	11/12/02	Thakur et al.	257	306	
	CP	6,515,343 B1	02/04/03	Shroff et al.	257	530	
	CQ	6,541,811 B2	04/01/03	Thakur et al.	257	303	
	CR	6,682,970 B1	01/27/04	Thakur et al.	438	240	
	CS						
	CT						
	CU						
	CV						
	CW						
	CX						

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**FOREIGN PATENT DOCUMENTS**

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
	CY	0 279 588 A2	08/24/88	EP			X	
	CZ							
	DA							
	DB							

**OTHER PRIOR ART** *(Including Author, Title, Date, Pertinent Pages, Etc.)*

	DC	Kim, J. et al., "High Performance Antifuse with Planar Double Dielectrics on Si1-xGex Pad for Field Programmable Gate Array Applications", IEEE Electronic Letters, Vol. 32, No. 24, pp. 2276-2277, November 21, 1996.
	DD	P.M. Smith and J.S. Custer, "Chemical Vapor Deposition of Titanium-Silicon-Nitride-Films," <i>Applied Physics Letter</i> , 70(23):3116-3118, June 1997.
	DE	
	DF	
	DG	
	DH	
	DI	
	DJ	
	DK	

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